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SPECIFICATION FOR
GRADING FOR MONSOONED COFFEE
(Second Revision)

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SPECIFICATION FOR GRADING FOR MONSOONED COFFEE

(*Second Revision*)

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Indian Standard
SPECIFICATION FOR
GRADING FOR MONSOONED COFFEE
(*Second Revision*)

0. FOREWORD

0.1 This Indian Standard (Second Revision) was adopted by the Indian Standards Institution on 25 September 1981, after the draft finalized by the Stimulant Foods Sectional Committee had been approved by the Agricultural and Food Products Division Council.

0.2 Considerable quantities of monsooned coffee are exported from India. The need has, therefore, been felt for formulating this standard. Monsooned coffee is obtained by allowing cleaned, garbled cherry coffee to absorb moisture from humid atmosphere and by equalizing moisture at intervals by suitable bulking and rebagging operations. The above operations are usually carried out during monsoon season in the West Coast. Monsooned coffee can also be produced under controlled and artificially created high humid conditions. The coffee beans absorb moisture in stages, swell up to nearly double the size, and develop colour ranging from pale white to golden/light brown. The process consists of exposing cherry coffee in layers of 10 to 15 cm thickness to damp atmosphere in a well ventilation cemented brick floored godowns during monsoon season. The coffee beans are ranked from time to time followed by bulking and rebagging at intervals. The process is completed in about 12 to 16 weeks, after monsooning, the coffee is sized, when necessary; subsequently, it is garbled, bagged and fumigated to prevent infestation, and then marketed.

0.3 This standard was initially published in 1967, the range of moisture content was included as 13 to 16 percent. Based on extensive work done at Coffee Board and Central Food Technological Research Institute, Mysore, this range was revised in the first revision (issued in 1975) as 13 to 14.5 percent. This revision also aligns the section on Terminology with ISO/DIS 3509 'Coffee and its products — Vocabulary' as adopted in India. A comprehensive standard is being compiled on methods of sampling.

0.4 In view of the developments in the trade practices of the second revision of the standard is prepared to include certain changes in Table 1 the grade designations and other editorial improvements.

1. SCOPE

1.1 This standard prescribes the requirements and methods of test for monsooned coffee, *Coffea arabica* and *Coffea caenophora* (subvariety *C. robusta* Lyn.).

2. TERMINOLOGY

2.0 For the purpose of this standard, the following definitions shall apply.

2.1 Extraneous Matter — Mineral, animal or vegetable matter not originating from the coffee cherry.

2.2 Insect Damaged Bean — Coffee bean damaged internally or externally by insect attack.

2.3 Insect Infested Bean

2.3.1 Live Insect Infested Bean — Coffee bean harbouring one or more live insects at any stage of development.

2.3.2 Dead Insect Infested Bean — Coffee bean containing one or more dead insect or insects' fragments.

2.4 Monsooned Coffee — Coffee bean obtained from cherry unwashed coffee which has been subjected to exposure to humid atmosphere to absorb moisture during which it swells and changes colour to golden/light brown.

2.5 Triage — The triage includes broken, withered spotted, elephant, small, discoloured, malformed, pales and pulper-cuts either in flats or in pea-berries. Triage shall be free from blacks, browns, stinkers and sours, and shall also be free from imperfectly monsooned beans to an extent not greater than the tolerance allowed in 4.2.

2.6 Imperfectly Monsooned Beans — Beans not properly monsooned and still retaining some characteristic of the corresponding green coffee.

2.7 Bad Smelling Beans — Beans having bad, musty or foreign smell when the sample is sniffed.

2.8 Blacks/Browns — More than a quarter of the bean surface black, blue brown or similarly discoloured beans and includes stinker and sour beans.

2.8.1 Bits — Broken coffee of less than one-third of the beans in size.

3. TYPES AND GRADES

3.1 There shall be mainly two types of monsooned coffee as given below:

- a) *Type 1* — Monsooned Arabica Cherry, and
- b) *Type 2* — Monsooned Robusta Cherry.

3.2 There shall be five grades of monsooned coffee as given below (*see also* Table 1):

- a) Monsooned Malabar AA,
- b) Monsooned Basanally,
- c) Monsooned Arabica Triage,
- d) Monsooned Robusta AB, and
- e) Monsooned Robusta Triage.

3.3 Monsooned coffee beans shall be graded on the basis of size and shape before packing.

3.4 The designation of grades and their requirements shall be as given in Table 1.

TABLE 1 GRADE DESIGNATION OF MONSOONED COFFEE AND THEIR REQUIREMENTS

TYPE	GRADE DESIGNATION	SIEVING REQUIREMENTS		GARBLING STANDARD PERMISSIBLE PERCENTAGE OF TRIAGE (T) BBB*
		Aperture Size, mm	Percentage by Mass Retained	
(1)	(2)	(3)	(4)	(5)
Type 1	Monsooned Malabar AA	7.25	90	2 of T
	Monsooned Basanally	6.50	75	3 of T
	Monsooned Arabica Triage	6.00	90	3 of BBB*
Type 2	Monsooned Robusta AB	7.00	90	3 of T
	Monsooned Robusta Triage	6.00	75	3 of BBB*

*Black/Brown/Bits (*see also* 2.8).

4. REQUIREMENTS

4.1 **Moisture Content** — The moisture content of monsooned coffee, when determined according to the method prescribed in Appendix A of IS : 3581-1981*, shall be between 13 to 14.5 percent by mass at the time of clearance of coffee from pool warehouses.

*Grading for green coffee (*second revision*).

4.2 On visual examination, the total defects as described in 2.1 to 2.5 in Monsooned Malabar AA shall be not more than 4 percent by mass and in Monsooned Basanally and Monsooned Robusta AB shall be not more than 5 percent by mass. The extraneous matter shall not exceed one percent in all the grades.

5. PACKING AND MARKING

5.1 Packing — The monsooned coffee beans shall be packed in new, clean and sound jute bags or any other suitable container as agreed to between the purchaser and the vendor. The bags shall be free from any fungal or insect infestation and shall be free from any undesirable smell.

5.2 Marking — The following particulars shall be marked legibly or labelled on each bag or container:

- a) Name of the material,
- b) Type and grade,
- c) Name and address of vendor, and
- d) Net mass in kg.

INTERNATIONAL SYSTEM OF UNITS (SI UNITS)

Base Units

Quantity	Unit	Symbol
Length	metre	m
Mass	kilogram	kg
Time	second	s
Electric current	ampere	A
Thermodynamic temperature	kelvin	K
Luminous intensity	candela	cd
Amount of substance	mole	mol

Supplementary Units

Quantity	Unit	Symbol
Plane angle	radian	rad
Solid angle	steradian	sr

Derived Units

Quantity	Unit	Symbol	Definition
Force	newton	N	1 N = 1 kg m/s ²
Energy	joule	J	1 J = 1 N m
Power	watt	W	1 W = 1 J/s
Flux	weber	Wb	1 Wb = 1 V.s
Flux density	tesla	T	1 T = 1 Wb/m ²
Frequency	hertz	Hz	1 Hz = 1 c/s (s ⁻¹)
Electric conductance	siemens	S	1 S = 1 A/V
Electromotive force	volt	V	1 V = 1 W/A
Pressure, stress	pascal	Pa	1 Pa = 1 N/m ²

INDIAN STANDARDS INSTITUTION

Manak Bhavan, 9 Bahadur Shah Zafar Marg, NEW DELHI 110002

Telephones : 26 60 21, 27 01 31

Telegrams : Manaksanstha

Regional Offices:

		Telephone
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